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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,473

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Josef Buechler

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EXAMINER

BARKER, MATTHEW M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/537,473	Applicant(s) BUECHLER ET AL.	
	Examiner MATTHEW M. BARKER	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12-15, 19, 20, 21, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden (4,733,238) in view of Hillman (WO 00/37960).

Regarding claims 12, 13 and 14, 21, and 24, Fiden discloses a radar device (Figures 1 +2) having a sensor and transmitter configured to transmit data, wherein the sensor and transmitter are simultaneously operable for a communication (column 2, lines 11-13). Fiden further discloses that the radar device is a pulse type radar device (column 5, lines 24-26), and that a transmitter element (40) is configured to simultaneously emit a broadband signal for sensing and a communications data signal, referenced above. The device inherently has a predefined transition/reception spectrum. Fiden does not disclose a notch filter to selectively attenuate frequency subranges containing spectral components of a sensing signal within a peripheral region of the transmission frequency range. Hillman discloses a related system and

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method where voice and data must be transmitted simultaneously. Hillman utilizes a notch filter to selectively attenuate frequency subranges containing spectral components of the data signal in a peripheral region of the transmission frequency range (Figures 5a-5c; page 12, lines 21-27). It would have been obvious to one of ordinary skill in the art to modify Fiden to utilize a notch filter and transmit data on the attenuated frequencies as taught by Hillman in order to eliminate the expense and complications necessitated by the modulation of the radar signal with the data signal.

Regarding claim 15, Hillman does not disclose that the peripheral region includes no more than the upper and lower 10% of the spectrum. However, Hillman does disclose that a frequency in the peripheral is chosen because more important energy resides at lower frequencies. It would have been obvious to further modify Fiden to use no more than the upper or lower 10% of the spectrum for data communications in order to minimize loss of the radar signal (see Hillman page 12, lines 32-35).

Regarding claims 19 and 23, Fiden does not explicitly disclose that the system is for a motor vehicle. Fiden does disclose it is for airborne, ship borne, and land based systems (column 1, lines 19-20). It would have been obvious to one of ordinary skill in the art to utilize the system of Fiden on a motor vehicle given the "land based" teaching of Fiden with no new or unexpected results.

Regarding claim 20, Fiden discloses a receiver (Figure 2) configured to receive a communication data signal and feed the data to a demodulation device, wherein the communications data signal is in a radar signal of a radar system according to claim 12 (see column 4, lines 50-52; column 2, lines 17-18).

4. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden in view of Hillman as applied to claim 13 above, and further view of Levin et al. (2002/0003488).

Neither Fiden nor Hillman disclose a plurality of frequency bands, each for the transmission of data from a different data class including at least one of emergency, log, and communications data.

Levin discloses a related combination radar and communication data system which transmits data of different classes including at least one of emergency, log, and communications (paragraph 0024). While Levin does not disclose transmitting on different frequency bands, one of ordinary skill in the art would have found it obvious to further modify Fiden do so in order to prevent interference and/or loss of data just as Hillman taught separating data from voice communication for the same purpose.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden in view of Hillman as applied to claim 12 above, and further in view of Levin, and Hodgson (4,403,208), and Song (5,208,756).

Fiden does not specify what information is included in the data communication, and therefore does not disclose amplitude modulation for emergency data and PSK types of modulation for communications and log data.

Levin discloses transmitting emergency, communications, and log data (paragraph 0024). Levin also does not specify the claimed types of modulation for the

data. Hodgson discloses a system for transmitting emergency information between vehicles using amplitude modulation (Abstract; column 11, lines 19-35). Song discloses a vehicle communication system using PSK types of modulation for communications and log data (Abstract; column 6, lines 40-44). Furthermore, Fiden does disclose that any types of modulation may be used (column 6, lines 30-33). It would have been obvious to one of ordinary skill in the art to include emergency, log, and communications data as taught by Levin as part of the data communications of Fiden in order to improve safety, using the well known modulation types as demonstrated by Hodgson and Song and provided for by Fiden himself with no new or unexpected results.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fiden in view of Hillman as applied to claim 12 above, and further in view of Levin.

Fiden does not disclose a plurality of radar systems configured to exchange data with each other. Levin discloses a related combination radar and communication data system including a plurality of systems configured to sense their surroundings and exchange data with each other (Figure 1; paragraph 0024). It would have been obvious to modify Fiden to include multiple systems as taught by Levin in order to improve safety (Levin paragraph 0024).

Response to Arguments

7. Applicant's arguments filed 9/29/2008 have been fully considered but they are not persuasive. On page 9 of the Remarks, Applicant argues that nothing in Fiden or

Hillman indicates that the notch filter of Hillman could effectively attenuate frequency subranges of the radar signal of Fiden, or that if so, such attenuation would be effective for transmitting a radar signal and message data simultaneously. The argument is not convincing because Hillman is relied upon for the teaching of using a notch filter where a common frequency range is utilized for multiple transmissions. It is not necessary that a filter with the exact specifications as the one used by Hillman be employed in the modification of Fiden, as one of ordinary skill in the art would surely design an appropriate filter for the given application.

Also on page 9 of the Remarks, Applicant argues that neither reference indicates that employing the notch filter of Hillman in the apparatus of Fiden would be less expensive and complex than the method and system of Fiden. The argument is not convincing because such an indication is not required to be explicitly stated in the references, nor has Applicant provided evidence or even suggested that employing a notch filter would not be less expensive and complex than the modulation and demodulation of Fiden.

On page 10 of the Remarks, Applicant argues that Hillman does not in any way indicate any desire to transmit data in a peripheral region of a transmission frequency of a radar device. Applicant is correct in that Hillman is not concerned with a radar device; however the argument is not convincing because Hillman is not relied upon to teach a radar device. Hillman does teach transmitting data in a peripheral region of a transmission frequency of a voice signal. While the term is broad and open to a great amount of interpretation, clearly a frequency of 2500 Hz would be considered to be in a

"peripheral region" of a spectrum where "most of the important frequency energy of the voice signal is contained below 1000 Hz".

On page 11 of the Remarks, Applicant argues that it would not have been obvious to modify the device of Fiden in view of the system of Levin to meet the limitations of claims 16 and 17 because the radar of the system of Levin is not operating during a communication mode. The argument is not convincing because Levin is not relied upon to teach simultaneous radar and communication transmission.

On page 12 of the Remarks, with regard to claim 18, Applicant argues that one of skill in the art would not have had any reason to have combined the cited references, and therefore it would not have been obvious to have combined the references. The argument is not convincing because motivation was suggested for the combination, and Applicant has not addressed, nor provided any evidence or reasoning against the suggested motivation.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW M. BARKER whose telephone number is (571)272-3103. The examiner can normally be reached on M-F, 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. M. B./

Examiner, Art Unit 3662

/Thomas H. Tarcza/

Supervisory Patent Examiner, Art Unit 3662